

# *The Fortnightly* **REVIEW**

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## **Cementation and Esthetic Problems in Crown and Bridge Procedures\***

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**M**any of the problems in dentistry relative to esthetics and cementation are not related to the materials themselves but stem rather from lack of knowledge regarding their use. A



Dr. Sullivan

beautifully constructed crown or bridge will fail in the mouth if the abutment teeth are unduly abused or if the restoration has not been considered as a part of the whole dental mechanism. Cement alone will not compensate for the shortcomings of a poor diagnosis, nor will proper esthetics insure a long life of usefulness for a restoration. Success or failure in crown and bridge prosthesis depends on faithful adherence to the principles of sound dentistry and on an understanding of the materials that are used daily in practice. Esthetics and ce-

mentation are only two branches of the complicated subject of crown and bridge, both based on these same principles of sound dentistry.

The importance of correct diagnosis cannot be overemphasized, nor can the need for roentgenographic interpretation, study casts, vitality tests, correction of occlusal disharmonies and other prerequisites of sound construction be stressed too often.<sup>1</sup> The possibility of periodontal damage from improper contact points and contours,<sup>2-4</sup> overhanging margins and other mechanical irritants must be borne in mind.<sup>5-7</sup> Since there are, fundamentally, two sets of specifications for a restoration, periodontal and mechanical, attention to the smallest detail is necessary to give the protection needed by the supporting structures if periodontal destruction is to be avoided.<sup>8</sup> Undoubtedly the maintenance of the freeway space<sup>9</sup> and the proper consideration of occlusion<sup>10</sup> are also necessary, especially in full mouth rehabilitation. In discussing crown and bridgework, however, it is not necessary to enter into the controversy regarding the relative merits of anatomic interdigitating cusps or shallow modified cusps.<sup>11</sup> In crown and bridgework the occlusal patterns formed by the masticatory processes of the patient can be followed.<sup>12</sup>

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(Dr. Edward J. Sullivan was graduated from the University of Illinois Dental School in 1939. He was an instructor in Crown and Bridge for his alma mater from 1939 to 1941 when he entered the Navy. Since he was retired from Service in 1944, he has been engaged in the private practice of dentistry in Evanston. He has appeared on dental programs throughout the United States, including our Midwinter Meetings, and is the author of a considerable body of published work. He is a member of the American Denture Society and the American Association of Dental Editors, and is a lifetime member of Delta Sigma Delta.

Dr. Sullivan served as Editor of the *Fortnightly Review* from June 1952 to June 1955 and was a staff member for a number of years prior to this period.)

In considering the materials to be used in obtaining esthetic effects or for use in cementation, their effect on tooth structure and the dental pulp should be taken into account first. Then the material itself can be considered—how it is used and abused, the basic concepts of color, and finally how this knowledge may be applied in everyday practice.

#### THE PULP AND ITS PROTECTION

In the past, in discussing pulp protection, greatest emphasis has been laid on the fact that abutment preparations necessitated tremendous amounts of heat. Recently, the *in vivo* studies of Lisanti and Zander<sup>13</sup> have raised some doubt as to the importance of this. They showed that the dentin acts as an excellent heat dissipater, and that when a temperature of 600° F. was applied for one minute to the base of a cavity in a tooth, 0.93 mm. of dentin was so efficient in reducing heat that the pulp temperature rise was only 91.5° F. They also observed no pulp deaths from the tests, and all pulps healed regardless of the temperature.

Other studies, however,<sup>14-16</sup> show that some physiological changes occur when the temperature is raised above 130° F., especially in the dentin. In addition, it is known that heat can cause blister formation and inflammatory changes in the pulp. It must be remembered, also, that excess amounts of heat will cause the tooth to be unduly sensitive, especially after the cementation of the restoration. Some form of coolant is needed for the comfort of the patient and also from a physiologic standpoint. The best coolant for rotating instruments appears to be

plain water at mouth temperature.<sup>17</sup> Air is the next best coolant, with the combination of air and water being third. The employment of diamond stones, tungsten-carbide burs and high speeds appears to be harmless to the pulp, but a coolant should be used as an added precaution. Since the maximum rise in temperature is noted within ten seconds of the beginning of the cutting operation, any "bearing down" on the instrument should be avoided.

Pulp damage, once considered to be due primarily to mechanical and temperature abuses, should now be re-evaluated. Probably the greatest nonbiotic cause of pulp deaths is chemical reaction—the result of the ingredients used in filling materials, cements and in sterilization. The major biotic causes of pulp deaths continue to be the process of decay, viruses and pathogenic bacteria. All of the afore-mentioned irritants must be considered capable of destroying the dental pulp but, fortunately, the greater majority cause little or no damage.

Since the turn of the century, controversy has raged regarding the effect of cements and other filling materials on the pulp. Finally in the early thirties it was realized that the pulp and dentin were closely related tissues and that any injury to the dentinal fibrils of the odontoblasts caused a reaction at their pulpal ends.<sup>18,19</sup> Without going too deeply into the histologic picture of inflammation of the dental pulp and the repair mechanism or breakdown of this tissue, suffice it to say that the pulp either reacts favorably or unfavorably to an irritation or stimulus. If the former occurs, secondary dentin is laid down as a defensive barrier.

If an unfavorable reaction occurs, the breakdown of tissue leads to formation of pus and its sequelae.

The most commonly used metallic fillings—amalgam and gold—apparently are not in themselves irritating to the pulp, regardless of the depth of the cavity.<sup>20</sup> The amount of secondary dentin laid down under many of these fillings indicates that the pulp has reacted more to thermal changes than to the fillings. Since the presence of secondary dentin indicates stimulation potentials, the use of sedative or protective bases is indicated in deep cavities.

By far the most irritating materials are the dental cements,<sup>21-24</sup> which include the silicate as well as the zinc and copper oxyphosphate cements. Undoubtedly the orthophosphoric acid is exceedingly irritating to the dental pulp, for a normal mix of cement has a pH of less than 2.0 and is approximately 50 per cent free acid.<sup>25</sup> This tends to reduce the normally alkaline tissue fluids of the dentin as well as the pulp, destroying the odontoblasts and initiating the destruction of the dental pulp.<sup>26</sup> Phosphoric acid is even strong enough to attack enamel.<sup>27</sup> The so-called cavity varnishes have little, if any, effect in protecting the dental pulp from these acids,<sup>28</sup> but they do help in the reduction of thermal shock. There is a class of cements, however, commonly called the sedative group that, as a rule, does not use phosphoric acid as a liquid. These cements are primarily the zinc oxide and eugenol types which usually also contain zinc acetate and some form of rosin. They have a crushing strength about one seventh that of the zinc phosphate cements, and they make acceptable cement bases, since the eugenol is utilized as an anodyne to protect the pulp. A much stronger cement base or sedative filling is zinc phosphate cement with equal parts of eugenol and cement liquid.<sup>25</sup> This cement mix is approximately three quarters as strong as regular cement, has adequate retentive powers, sets faster, but can utilize the eugenol as an anodyne without neutralizing the orthophosphoric acid of the liquid.

Studies in pulp-capping,<sup>29-31</sup> especially in the use of sedative bases of calcium hydroxide and zinc oxide in a chloroform solution of polystyrene or calcium hydroxide and methyl cellulose paste,<sup>32</sup> indicate a step in the right direction in protection of the dental pulp. Cement bases have been abused tremendously, and one common practice that should be avoided is to leave decay in place until the inlay is ready to be cemented. This practice only helps to drive free hydrochloric acid into the dentinal tubules. It is better to place the cement bases, finish the cavity preparation and then make the inlay.

It is too early to tell the exact nature of the relation of the direct and indirect filling resins to the dental pulp and, as could be expected this early, investigations do not completely agree.<sup>33-35</sup> There are indications, however, that the polymerization process against the tooth tissues occasionally produces inflammatory changes, but that this usually subsides and the pulp returns to normal.<sup>36</sup> The long-range success or failure of the resins so far as the pulp is concerned probably rests on whether, like the cements,<sup>37</sup> they produce changes in the dentin which will obliterate many of the dentinal canaliculi, thus solidifying the dentin immediately under the restoration. At the present time the controversy as to whether or not to use the direct filling resins is based primarily on the clinical picture rather than on the histologic.<sup>38-40</sup>

Cavity sterilization, once considered so essential in a successful restoration, should now be reconsidered in the light of present knowledge. It is doubted whether actual sterilization of a cavity is feasible<sup>41</sup> or really necessary. It has been shown that the most common sterilizing agents—alcohol, hydrogen peroxide and phenol<sup>42</sup>—have no therapeutic value and in reality do more harm than good. The filling materials hermetically seal the dentin and any microorganisms left in the dentin either remain dormant or die from lack of moisture. Only by seepage from the margin of the restoration can the carious process again be started.<sup>43-45</sup> The toxins from the dead



bacteria may, after many years of an otherwise successful restoration, cause pulpitis or even death of the dental pulp,<sup>46-48</sup> but fortunately these instances are rare.

Silver nitrate, although found to be only 28 per cent effective for sterilization,<sup>48-48</sup> is still the agent of choice for posterior teeth,<sup>49</sup> not only because of its ability to penetrate carious dentin and decalcification,<sup>50</sup> but also because it can penetrate the dentinal tubules, even to the pulp without any apparent pulpal damage. This occurs with or without secondary dentin formation.<sup>51</sup> It must be remembered, however, that if the precipitating agent is applied first to the tooth structure and is followed by the silver nitrate, only surface penetration may occur.

Recent investigations by Colton and Ehrlich<sup>41</sup> have shown that the direct filling resins have no bactericidal effect and therefore play no part in the prevention of recurrent decay, but silver amalgam, silicate cements and the zinc cements do. The addition of antibiotic agents not only increases the bactericidal action of the cements but also gives some bactericidal properties to the direct-filling resins. When either oxyphosphate of zinc cement or zinc oxide and eugenol are placed over an exposed pulp, abscess formation and liquefaction necrosis occur. However, if a paste is made of tap water, penicillin G potassium and calcium carbonate, a new bridge of dentin is formed over the exposure and normal pulps result. This technic eventually may prove successful in instances of carious exposures where infection has been introduced into the dental pulp.<sup>52</sup> The use of antibiotics has been advocated,<sup>53</sup> and it appears that the future of the sterilization of cavities may well lie in the incorporation of antibiotics into filling materials and dental cements.

#### FILLING MATERIALS

The first substance to be considered is dental cement. The National Bureau of Standards<sup>54</sup> classifies cements into four

groups: in the first group is the zinc oxychloride (with saturated solution of zinc chloride as the liquid) and the zinc eugenol cements, mentioned earlier, that are used primarily for sedative fillings or as a temporary cement. In the second group is the copper phosphate and zinc phosphate cements used for antiseptic fillings and cementation of appliances. The third group actually is comprised of the cements of the first two groups to which have been added copper, mercury or silver salts to increase their germicidal properties. The fourth group consists of the silicate and the zinc phosphate-silicate cements used for fillings and cementation. The liquid used for the last three groups is usually an aqueous solution of phosphoric acid, to which has been added zinc or aluminum salts.

*Silicate Cements* • The silicate cements differ radically from the zinc phosphates. They usually are made of silica, alumina, lime and flux and when mixed with the liquid, undergo a complicated chemical change, forming a gel. In order to be used as a cementing medium, thin mixes must be made which then increase the amount of acid available for absorption into the dentinal tubules before the mass sets. It is during this time that silicates are potentially harmful for it has been shown that after a week's time they are practically neutral.<sup>55</sup> Other reasons for not using the silicates for cementation purposes are their brittleness and their inability to absorb shock, their tendency to dissolve and disintegrate and, finally, since most silicates contain at least 10 per cent fluorine, their danger to the dental pulp which cannot be minimized.<sup>56</sup>

*Zinc Phosphate Cements* • The zinc phosphate cements are by far the most common agent used for cementation and, in spite of many abuses by the profession, do a reasonably good job. They are composed primarily of zinc oxide, with some magnesium oxide, silica, and other heavy oxides. Unlike the silicates, the zinc phosphate cements form compounds that are crystalline in nature, absorb more shock,

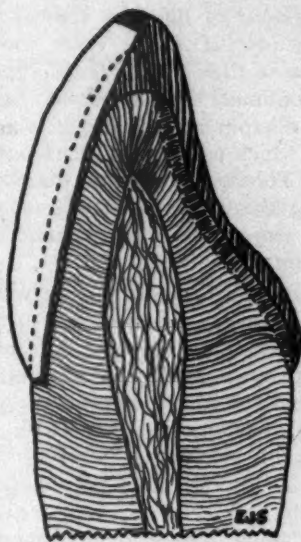
have a lower solubility in the mouth and do not contain fluorine. The exact chemical change is not known, but the zinc oxide with its modifiers, when mixed with phosphoric acid, forms a solid which is a different compound, oxyphosphate of zinc.<sup>57</sup>

There are two schools of thought as to how the zinc phosphate cements retain a restoration. The first believes that since the tooth substance is rich in calcium and magnesium phosphates and since phosphoric acid has a strong affinity for calcium and magnesium as well as for gold, the retentive force is chemical in nature.<sup>57</sup> The second school of thought, and probably the more accurate, believes that there is a frictional retention between the cavity wall and the inlay and the cement only closes the gap between the two, locking the inlay in place by the gripping of the individual crystals in the cement mass.<sup>58</sup>

**Acrylic Resins** • There have been controversies regarding the use of the acrylic resins ever since their introduction in dentistry. Since they have been adapted fairly recently to crown and bridge prosthesis, some mention should be made of their shortcomings.

The resins are by far the most natural-appearing material used in dentistry today, therefore, they are potentially best esthetically for crown and bridgework.<sup>59</sup> Failures in their use usually are due to a lack of adequate knowledge of the material and its limitations rather than to a lack in the material itself.<sup>60</sup> The advent of the Nealon technic<sup>61</sup> has eliminated many of the problems, and even though the direct filling resins do not reach the technical specifications of the indirect, they still are perfectly capable of meeting clinical requirements<sup>62</sup> and are far easier to handle.

It is known now that plastic resins have a tendency to change color, especially the yellows which tend to become more yellow;<sup>63</sup> also, that many of the strains and much of the crazing has been due to dry polishing.<sup>64</sup> By far the most important fact that has been learned is the susceptibility of the resins to wear and their lack



**Fig. 1** • When plastic resin is used, tooth should be covered with gold in full crown coverage. Relation between enamel, dentin and pulp to completed restoration is shown

of resistance to recurrent decay. Therefore, the use of plastic resins for jacket crowns and stress-bearing bridges is contraindicated;<sup>65</sup> in order to be used properly, the tooth and occlusion must be protected by metal<sup>66</sup> (Fig. 1). This is true not only for crowns but also for pontics. Some writers even advocate having gold rather than resin on the gingival surface.<sup>66</sup> Highly polished gold is said to accumulate less debris and calculus-like material than plastic resin; evidence, however, appears to place the resins above gold but below polished porcelain in the preference scale.

The tooth should be protected by metal because all of the restorative materials, after insertion in the mouth, exude fluids from the margins of the restorations when the teeth have been subjected to extreme temperature changes.<sup>67</sup> This applies to cast gold, acrylic resins, amalgam, gold foil and silicate cements. After being in the mouth for some time, only the acrylic resins continue to seep. Lack of recurrent caries around the metallic restorations probably is due to the spaces being filled with the corrosion products of the filling material, while with the silicate cements,

the amount of fluorides combat decay. In the case of acrylic resins, however, because of their high thermal expansion and continued fluid exudation, a space of 10 microns at the margin is not unusual, which permits the development of caries. This accounts for the discoloration seen at the gingival margins of acrylic jacket crowns and their eventual failure as a dental restoration.

Another development has been the introduction by McLean in 1948<sup>68</sup> of acrylic cements. He showed that by using 1,000 to 2,000 mesh polymers instead of the usual 120 to 140, approximately half as much monomer was needed to obtain a workable dough. He was one of the first to incorporate in the polymer benzoyl peroxide, and a further catalyst, nitrogen trihexylamine. The working properties of acrylic cement seem to compare favorably with those of oxyphosphate cement, but the acrylic cements are far superior in their performance in the impact fatigue test. Although originally suggested by Tylman,<sup>69</sup> acrylic cements remained undeveloped until it was shown recently by Stockton<sup>70</sup> that they could be used to compensate for the difference in the coefficient of linear expansion and contraction of acrylic restorations, and also compensate for the inability of the acrylic restorations to adhere to tooth structure. The greater amount of polymerization takes place outside of the mouth, then the restoration is inserted for final polymerization, removed, and is then cemented in place with a plastic cement and polished. Whether the use of plastic cements will overcome the shortcomings of the resins, only time and research can tell.

*Hydrocolloid and Alginate Impression Materials* • Increased interest in the use of the hydrocolloids<sup>71-76</sup> as well as the alginates<sup>77-79</sup> as impression materials has spotlighted some of their shortcomings. Placing complete reliance on their accuracy, however, will only lead to unsuccessful bridges and crowns. The limitations of these materials must be realized, and they should be used only on short

spans and where conditions are ideal. Although both the hydrocolloids<sup>80</sup> and the alginates<sup>81</sup> are capable of being electroplated, much still remains to be desired with regard to dimensional change and accuracy. Other undesirable features of the hydrocolloids and alginates are the critical temperature of the mix of material, the questionable use of stone master dies, the inability of the impressions to withstand storing, the difficulty in separating models and many other factors. Preliminary investigations indicate that the new synthetic rubber base impression materials approach the ideal for use as crown and bridge impression materials. Once again, however, only time and research can tell if they will find a place in the dentist's armamentarium.

#### CEMENTATION OF RESTORATIONS

The actual cementation of any restoration is not a simple process. The preparation of the restoration for cementation is of first importance. Since most difficulties are experienced with bridges, their cementation will be used to exemplify the difficulties encountered with all metallic restorations.

The bridge is first tried in the mouth without the pontics and is checked for fit, tension or spring,<sup>82</sup> contour of margins, contact points and occlusion. If one of the retainers does not appear to be accurate, possibly because of a change in position of the abutment, the bridge may be cemented temporarily to allow the abutment to realign itself. Temporary cement is never placed in the tooth that needs correction, for it will only cement the bridge in its improper position. After the metallic portion of the bridge has been checked and corrections made, the pontics are inserted into the backings and are waxed into position. The gingival portion of the pontics is then coated with a thin layer of pink disclosing wax, and the bridge is inserted in the mouth. After removal, points of pressure are noted on the pontics and are relieved. This procedure should be repeated until the pon-

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# Your Insurance

There appears to be a misunderstanding among some members as to the termination date of their individual insurance under the disability and hospital plans which are sponsored by the Society.

So you are fully informed we will discuss this subject in detail.

The disability plan (Accident and Sickness) which is underwritten by Standard Accident Insurance Company permits you to continue your policy until the first premium due date following your seventieth birthday, providing:

1. You pay the premium when due.
2. You remain an active member of the Chicago Dental Society.
3. You remain in the active practice of dentistry.

The Company does have the right to terminate the insurance of all members but it cannot terminate your policy, except as stated before.

The All Star Hospital Plan which is underwritten by Michigan Life Insurance Company allows you to continue your policy in effect at our Society group rates, regardless of your age, providing:

1. You remain an active member of the Society.
2. You pay the premium when due.

If you retire from dentistry and do not remain an active member of the Society your insurance will be continued by the Company but not at the Society rates. (Also see remarks which follow on Catastrophe Hospital and Nurse coverage)

The Company has the right to terminate the insurance of all members but it cannot terminate your insurance under the Society plan, except as stated above.

The Catastrophe Hospital and Nurse coverage is attached by rider to the hospital policy of those members who applied for the protection. This rider itself terminates when:

1. You retire from active practice. Your hospital policy may be continued but the Catastrophe coverage cannot.
2. You discontinue your active membership in the Society.

We suggest that you cut this article out and keep it with your policies.

**ANNUAL CLINIC NIGHT**  
**WEST SUBURBAN BRANCH**  
of the  
**CHICAGO DENTAL SOCIETY**

**Tuesday evening . . . . April 10**

**RIVERSIDE COUNTRY CLUB**

26th and Des Plaines Ave.

**Progressive Table Clinic—"Immediate Dentures"**

**Denture Research Group**

DR. BRUNO KRZEMINSKI, Chicago  
DR. STANLEY BRZEZINSKI, Chicago  
DR. FRANK WCISLO, Chicago

DR. GEORGE FLEMING, Elmhurst  
DR. CHESTER FRANK, Chicago

**"Advance Radiography Interpretations"**

DR. BYRON MAY, Chicago

**"An Approach to Complete Endodontics"**

DR. E. JAMES BEST, Evanston

**"Clinical Pathology of the Mucous Membrane"**

DR. FRANK WENTZ, Chicago

**"Treatment and Diagnosis of Hard and Soft Swellings"**

DR. RICHARD L. VERBIC, Elgin

**"An Analysis of Habit Causing Malocclusion"**

DR. DAVID THOMPSON, Elmhurst

**"Antibiotics"**

DR. ROBERT CHRISTOPHER, Evanston

**"Radio Techniques, Appliances for Deciduous Teeth"**

DR. I. MILTON DAWSON, Evanston

**Dental Hygienists**

**"The Hygienist's Contribution to Dentistry"**

DOROTHY BASSO, Chicago

**"Education of Dental Hygienists"**

DODIE CIOTA, Chicago

**Dental Assistants**

**"Production Control"**

JUNE MILLER, Downers Grove

**"Child Reception"**

ELAINE MAGNESEN, Oak Park

JOYCE MAY, Cicero

**Cocktails, 6:00**

**Dinner, 7:00**

**Clinics, 8:15**

**For dinner reservations, call Dr. B. R. Jones, Riverside 7-5395**

Dr. Richard A. Anderson  
President

Dr. LeRoy Sanden  
Program Chairman

Dr. James H. Ridlen  
Clinic Nite Chairman



# NEWS OF THE BRANCHES

## NORTHWEST SIDE

Maybe the month was too short, but the Northwest Side sure has been quiet. It seems that the only news that I can find concerns myself, and by the time you are reading this column I will be basking in the sunshine of Florida—and here it is in the fifties, or is it now in the sixties? The main reason for my trip will be to attend my brother's wedding—but I do understand the fishing has been pretty good this year and I may just force myself to wet a line or two. . . . Well, that certainly was kindly of the postman—he just brought me a card from St. Petersburg, Florida and a letter from one of my spies. . . . Joe and Ann Lebow are resting and golfing it up down in St. Petersburg—and how do the Cardinals look for this year, Joe? . . . A testimonial dinner will be given for Sam Kleiman in the Crystal Room of the Palmer House on March 20 and everyone interested in further information or tickets can reach chairman Gerson Gould at his office, MOnroe 6-5443. . . . And, don't forget the Loyola Homecoming on April 11—among the many workers for that big day are Ted Czeslawski and Ted Krynski. . . . Now a late flash, thanks to Bell and Ameche—the nominating committee had their annual meeting and will present the following slate: President—I. Frank Brzezinski; President-elect—Folmer Nyman; Vice-president—Ben Gillmeister; Secretary—Alf Altern; Treasurer—T. V. Weclaw; Board of Directors—Ted Czeslawski (chairman), Ray Rux, Lee Schwartz. Yours truly also accepted the job of golf chairman and being a complete neophyte at such a job (what's a putter?) I am anxiously awaiting a great deal of assistance from you oldtimers. . . . And don't forget Ladies' Nite, which will be held sometime in the merry month of May.—*Lee Schwartz, Branch Correspondent.*

## KENWOOD-HYDE PARK

Clint Fisher has quite an array of table clinics prepared for our "Clinic Nite" on April 3rd. Clint claims they will rival the program at the Midwinter meeting. Here is a short preview of what you can expect on this fabulous nite, where almost every phase of dentistry will be covered. A direct and indirect inlay technique—x-rays—amalgam—dental photography—dental assistants. There are many more, so don't miss this tremendous opportunity to gain a bit of knowledge in almost every phase of dentistry. Call Henry Leib, NOW!!! and beg him to hold a dinner reservation for you. Clint has hired the Andy Frain organization to handle the overflow crowd so don't be left out. You can avoid the inconvenience of waiting in line by calling MI-3-9607 and tell Henry you will be present for dinner. . . . A mouse has established residence in Rudy Grieff's new suite in the South East Medical Center and Rudy is having a *time* keeping his assistant in his office. . . . Tom Humble picked up his mirror and explorer and moved to 1753 W. 95th Street. The best of luck to you, Tom. . . . A Workshop on Training of Dental Laboratory Technicians, sponsored by the Council of Dental Education of the ADA in cooperation with the Committee on Dental Trade and Laboratory Relations, was held in the Morrison Hotel on March 5, 6, 7. Bob Kreiner was Chairman of one of the discussion groups on Tuesday, March 6. Jesse Carlton, Wayne Fisher and Walt Dundon gave resource papers. . . . Jesse Carlton also gave a clinic in Ft. Dodge, Iowa. . . . Suite 2400-A in the Pittsfield building is now occupied by Graham Davies. There is quite a story connected with how Graham acquired the suite, why not ask him about it? . . . Bob Pinkerton has joined the distinctive group of men who are grandfathers for a second time. Bob is very proud of the

honor. . . . Wayne Fisher has been appointed as a member of the Joint Policy Committee of the Illinois State Dental Society and the Illinois Dental Laboratory Association. . . . Stan Korf is taking a very comprehensive Spanish course and expects to open an office in Spain very shortly. . . . Phil Rubens has opened an office in Highland Park, good luck in your new office, Phil. . . . See you April 3, at Kenwood's Klassic Klinik Knight.—Howard J. Harvey, Branch Correspondent.

#### WEST SUBURBAN

Take a look at the grand assembly of talent for the Clinic Night at West Suburban and cross off the evening of April 10th. See the special announcement elsewhere in this issue. Then call B. R. Jones at RI 7-5395 for dinner reservations. . . . Also remember the West Suburban Study Club meeting at Louis' restaurant in Addison on Thursday, March 22, with Jack Reinhardt on "Hydrocolloid Tech-

nique." . . . Received a copy of the *L. A. Times* with a picture of our friend and former West Suburbanite, Bob McNulty, receiving a check for \$28,900 for atomic research at the U.S.C. Dental School. . . . Heard from Bill Fellman at Hollywood in Florida where he rides one of those cars around the golf course and collects dimes from unsuspecting would-be golfers. . . . Don Jaeger is off for a well-deserved vacation in Fla., where he will sea-fish and swim to his heart's content. . . . Andy Anderson of Villa Park likes Biloxi better. . . . Rex Smith is vacationing in Elmhurst Hospital cultivating a newly-found ulcer and feeding it a new diet of eggs, milk and calcium. . . . A premature announcement was made of Grandpa Al Ryan's new grandson in a recent issue. The real date was Feb. 21 and grandpappy had more trouble than the mama at the hospital. . . . Bill Kirby is planning a western tour with talks at Oregon State's meeting in Portland in early May. He'll have his better half with

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## 92nd Illinois State Meeting

**P**lan now to attend the 92nd Annual Meeting of the Illinois State Dental Society, on May 14th, 15th, and 16th, in Springfield, Illinois.

This year's program has a new streamlined format. On Monday, Tuesday and Wednesday mornings, a progressive seminar class will be held on "Dentistry as it Relates to Occlusion." The faculty consists of four internationally prominent lecturers and authors—Dr. Ernest Granger of New York, Drs. Harry Sicher, LeRoy Kurth and Stanley D. Tylman of Chicago.

The April issue of the *Illinois State Dental Journal* will contain a manual for the seminar class and also the full program for the meeting. Do not neglect to read it.

Monday afternoon will be devoted to a sports program, followed by a banquet in the evening. Tuesday afternoon will be open for meetings and visiting, followed by the President's banquet in the evening, at which Governor Stratton will be guest of honor. Limited attendance clinics and the annual business meeting will be held on Wednesday afternoon.

Don't forget to bring the ladies as special entertainment has been planned for them on the three days.

Hotel reservations are now being accepted—see the March *Journal* for hotel and motel listings.

We hope to see all of you in Springfield in May.

The Committee—Vincent B. Milas, *Chairman*.

## CEMENTATION AND ESTHETIC PROBLEMS

*(Continued from page 10)*

tics are just barely resting on the gingival tissues.

The inside of the retainers should be relieved to allow a thin cement layer that will reduce shock to the tooth and act as an insulator against heat and cold. The driving of snug inlays<sup>83</sup> should be avoided insofar as is possible; such inlays can be relieved by either of two methods. The first method<sup>84</sup> is to coat with wax the entire outer surface of the inlay and the cavosurface for a width of from 0.5 to 1 mm. and place in nitrohydrochloric acid for a period of from 5 to 30 minutes, depending on the amount of gold that must be relieved. The second method is to use disks and burs. Only after the retainers are relieved can the pontics be cemented to the backings. The entire bridge is then washed with liquid soap and water and dried with grain alcohol.

The abutments then are cleaned with pumice, thoroughly washed with a stream of warm water and dried with cotton and warm air. Alcohol should never be used prior to cementation for it dehydrates the tooth, removing the dentinal fluids, thus allowing the free acid of the cement to penetrate into the pulp. Silver nitrate may be applied to posterior teeth as an added precaution, and a thin layer of cavity varnish is applied over the exposed dentin and dried with warm air.

The mixing of the cement must be done on a temperature controlled slab so as to allow the greatest amount of powder to be incorporated into the liquid. Use of the slab lengthens the working time and shortens the time required for the final set of cements, thus yielding a warmer cement that is more tolerable to the tooth.<sup>85</sup> Many dentists avoid using the temperature slabs, but they are essential not only for the mixing of cements but also for silicates. The best temperature is 65 to 70° F. or just above the dew point of the slab. This temperature is obtained easily by immersing the slab in cold water or, if an air-conditioning unit is available, by cooling over the cold air duct.

The cement and liquid are now placed on the slab and the powder is divided into six equal parts. A minute amount of powder,<sup>86</sup> about the size of the head of a no. 3 round bur, is thoroughly incorporated into the liquid and allowed to remain for three minutes. The remaining cement is then incorporated into the liquid, one section about every 20 seconds, and the mix is spread over a large area to diffuse heat. The resultant mix is one sufficiently plastic to allow plenty of time for the cementing of any bridge or a number of inlays without danger of the cement beginning to set before the restorations are in place. Another method of obtaining a retarded cement is to incorporate one section of the cement in the liquid, spatulating it thoroughly for one full minute and then continuing the mix as before.

The inner surface of the retainers are first coated with the cement mix, for if the cement is inserted in the cavity first, the temperature of the tooth would hasten the setting.<sup>87</sup> The retainers then are completely filled and the bridge placed in the mouth and pressed into place with finger pressure. An automatic foil mallet or round burnisher and hand mallet may be used to force the restoration into position. Because of the steep planes of the lingual surface of many anterior teeth, a straight chisel may be used instead of a burnisher or automatic mallet. An inlay will rebound<sup>88</sup> under mallet force if it does not fit the cavity walls properly, or if air is trapped between the cavity walls and the inlay, or if the mallet force is not sufficient to break the surface tension of the cement.

The excess cement is removed with a finger or cotton moistened with alcohol and the margins are flushed with round burs. Rotating the bur from gold to tooth surface helps to finish the margins of the restoration, vibrates it further and removes excess cement. Fine sandpaper disks can then be used on the external and internal margins down to the gingival tissue. If this tissue had been packed properly with a temporary filling between appointments, the lateral gingival corner



of the inlay, the most vulnerable part of any inlay, can be burnished with fine pointed diamond or carborundum stones. Caution should be used at this point to use only very fine stones, for rough ones may scratch the enamel unduly. The bridge is then held under pressure until the cement has completely set, and the excess cement is removed. The restoration is then checked for occlusion and is tested in all movements of the mandible so that eventual periodontal and pulpal irritations may be avoided.<sup>88</sup> Final polishing of the bridge should be delayed until a later appointment when wet pumice and whiting can be used to remove any scratches on the gold or tooth structure.

Porcelain jacket crowns are cemented in much the same manner as the bridge; however, common sense dictates that they cannot be burnished or malleted into place. Rotary motions of the crown also should be avoided as this sometimes causes cracks or complete breakage of the porcelain. Finger pressure or the use of a rubber eraser on the incisal edge usually is sufficient to break the surface tension of the cement and hold the crown in place until the final set. Abnormal stresses should be avoided with porcelain jacket crowns.<sup>89</sup> If lost vertical dimension must be restored or the occlusion corrected, work in the posterior section of the mouth must be completed first or the jacket will fail.<sup>90</sup>

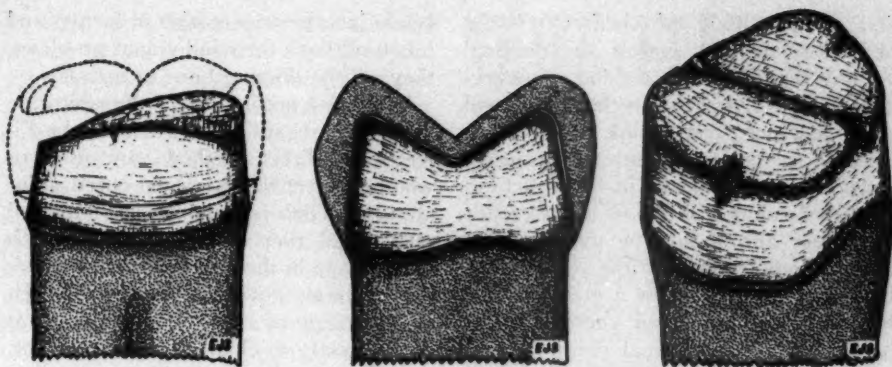
It is exceedingly irritating if a gold crown, either by itself or when it is used as a bridge retainer, is high in occlusion after cementation. This can indicate only one thing—that the crown is not completely down on the preparation.

Gold crowns, in order to give many years of service, must meet certain requirements. The teeth must be prepared so that the gingival border of the gold crown will extend slightly beneath the free border of the gingiva without injuring the delicate periodontal fibers.<sup>91</sup> Crowns that fit properly will not cause irritation or deepen pockets. The gingival margin of any gold crown, therefore, must fit as accurately as a gold in-

lay.<sup>92</sup> Another prerequisite is a minimum of 1.5 mm. of metal at the crest of the cusps and at least 1 mm. in the sulci and grooves<sup>93</sup> so as to allow for wear and strength. The only practical gold crown that would meet these requirements would be the all-cast type, or some modification of it.

As with the inlay, the principal reasons that a gold crown does not seat properly during cementation are that air is trapped between the walls of the preparation and the crown, the surface tension of the cement has not been overcome, too much hydraulic pressure<sup>94</sup> has developed, or too much cement has been trapped between the occlusal portion of the preparation and the crown. The chief reason usually is, however, that there is not enough room for the cement to escape, and the degree of difficulty in seating a restoration is in direct proportion to the distance cement has to travel from the innermost portion of the preparation to the closest margins of escape. Many methods have been developed to help the cement escape. A hole can be made in the occlusal or buccal surfaces of the crown which later can be filled with amalgam or gold foil.<sup>95</sup> The inside of the crown can be relieved with burs or stones or with nitrohydrochloric acid. Four grooves can be cut on the inside of the crown almost to the peripheral margin,<sup>96</sup> or the crown can be waxed up over a copper band matrix, then invested and cast. Finally the casting can be immersed in nitric acid for a few hours to dissolve the copper band.<sup>97</sup>

Many years of experience have proved the following technic to be most successful. The preparation and impressions are made in the usual way, and the master die and occlusion casts are prepared. Thick tinfoil is then adapted and swaged to the die, using tinners joints which can be reduced with a rubber wheel. Any good foil can be used, but that found with the regular dental x-rays is ideal both with regard to thickness as well as handling capacity. The crown is then completely waxed up and checked for occlusion and contact.



**Fig. 2 • Left:** After tinfoil matrix is adapted, crown is completely waxed up, and 1 to 1.5 mm. of wax at gingival margin and tinfoil are removed. After lubricating die, fresh wax is flowed around gingival margin, crown is removed, tinfoil peeled out, invested and cast. **Center:** Cross section of completed crown showing adequate cement space as well as inlay type fit and seat around gingival margin. **Right:** Sluiceways are made on preparation immediately prior to cementation of crown to allow excess cement to escape

A razor blade or scalpel is used to remove 1 to 1.5 mm. of wax on the gingival aspect, and the foil is removed, exposing the master die. After the die has been lubricated, fresh wax is flowed around this area. It is advisable to make the wax somewhat thick around the gingival margin so as to insure casting (Fig. 2, left). The wax crown is then removed and the tinfoil is easily peeled from the inside. The crown then may be invested, cast and polished in the usual manner. The resulting all-cast crown (Fig. 2, center) fits the gingival portion of the tooth like an inlay and proper seating is assured. In addition, there is sufficient space to permit an easier flow of cement. Before the crown is cemented, however, four grooves (Fig. 2, right) are made on the preparation at the buccal, lingual, mesial and distal occlusal edge with a diamond stone or disk, and a sluiceway is added at the occlusal portion of the crown to allow cement to escape.

#### COLOR PROBLEM IN ESTHETICS

The production of color in any dental restoration is extremely complicated. Color can be mixed by two methods<sup>98</sup>—by the addition of light or by the subtraction of light. In the first method, if red, violet and green colored lights are added together, a white light is obtained.

In the second, or subtractive method, pigments of crimson, blue and yellow are added to get black. This is the method used by artists, and the difference between the two methods lies in the ability of a pigment to subtract certain colors from white light by absorption, leaving the remainder to characterize the color of the object by reflection. This, then, is where color actually comes from.

Color itself, though, has three dimensions or properties.<sup>99</sup> The first is commonly referred to as hue and pertains to the description of the color qualities, as yellowish, grayish, reddish or greenish. Brilliance, the second property, classifies the color as to its lightness or darkness. The third property is saturation, which pertains to strength of the hue as, for example, in the amount of gray seen in two colors of similar brilliance.<sup>100</sup> The word "shade" or "shading" is often used, but in artists' parlance this really means that black has been added. Actually the word that should be used instead of shade is "hue," because the use of black is definitely out of order in dental colors.<sup>101</sup> When a color is selected, the brilliance of the hue must be considered first and then the saturation.

Normal tooth colors are usually those reflected from the dentin through the transparent enamel.<sup>102</sup> Some controversy exists as to whether the dentin actually

has color in itself, or whether it is the reflection of light against the dentinal tubules that is seen. One thing seems certain, however, and that is that the dental pulp does not exert a pink or red influence on the color. Any attempt to inject reds or pinks artificially in the matching of dental colors will almost always result in failure and should be avoided. Actually, there are some of the yellows that have either a reddish or a greenish tint, but these are far from common. The basic colors from normal dentin would appear to be yellow, brown, gray and white.

The selection of color should be based on the complexion tone of the patient which will fall into one of two groups, the yellow or the gray. The yellow group usually includes persons whose hair is blonde or red as well as many with dark hair and eyes. The red or yellow usually predominates in their complexion. The gray group ordinarily possesses dark hair and eyes with gray, olive or brown colors predominating in their complexions. If this basis is used as a starting point for color control, what follows should be fairly easy.

Naturally, the selection of color depends on many factors. First the base color should be selected with reference to the thickest portion of the tooth, and then the more transparent incisal or overlying portion is selected. To avoid some of the tricks played by daylight and artificial light, matching should be done in the middle morning or afternoon hours using the natural north light if possible. The patient's head should be turned from side to side so as to observe all possible light angles. The fact must always be kept in mind that an operator can easily become color fatigued, then most colors will appear to match. Other factors to be careful of are the background in the mouth, the color of patient's clothes, reflection of surrounding equipment and the natural ability of the dentist to match colors.

An operator is primarily interested in obtaining correct esthetics with the cementation. Since the plastic resins, por-

celain jackets, cementation of facings and inlays all have their individual problems, they will be discussed one at a time.

The color possibilities of the resins are unlimited, regardless of whether the direct or indirect methods are used or whether direct filling or heat-cured resins are used. Their opacity can be controlled easily, and their ability to blend with other colors in the mouth is unsurpassed. The resins are now manufactured in such a wide range of colors that it usually is not necessary to change them. However, if it is necessary, zinc oxide or titanium oxide can be used to change the opacity. To color the resins, cadmium red, brown ochre, yellow ochre, vermilion or "Royal Blue" pigments may be used.<sup>96</sup> In short, color in dental resins can be controlled by using the same inorganic pigment that is used in dental porcelains.<sup>103, 104</sup> Many times mineral stains have been used in porcelain work; these stains can be used effectively with resins, but care must be exercised to mix the stains completely or the colors may streak.

A technic will be described later which can be used if resins are to be cemented without a layer of gold between them and the tooth. If resins are placed over gold, a masking material should be used to prevent the distortion of color by the gold or other metal used. This is especially necessary where thin layers of plastic resin are used. An ivory mask is used for the body in light colors, changing to a buff, light yellow and dark yellow for the darker ones. Behind the incisal portion, a faint bluish gray should be used to stimulate the transparency of the incisal aspect. After the masking material has been cured by heat from a Bunsen flame or lamp, the main body of the plastic resin can be applied, using either the heat-cured or the direct filling types. Characterization such as simulated fillings, hairline checks and other changes can be accomplished by using colored Mikado pencils immediately below the outside layer of resin.<sup>105</sup>

At the time gold is being cemented in a tooth, caution should be exercised so that the cement used does not "show



through." It is better to test the color of cement before cementation by incorporating it with glycerine. Water is a poor vehicle for testing dental cements for it makes them appear much too light, especially the darker colors. Plain glycerine is also best to test cements that are to be used in cementing porcelain facings to gold or platinum colored backings. The latter, however, should be avoided unless a decided grayish color is necessary at the incisal tip. The body of a facing is seldom affected by platinum or stainless backings, but the thin incisal portion of the facing reflects the blue-gray of the backing in the cemented restoration.

The cementation of porcelain jacket crowns is the final test of an operator's knowledge of color and dental cements. Once again, glycerine should be used as a testing solution. An exception to this is when eugenol is used with the cement liquid to protect sensitive or radical preparations. The most acceptable liquid would be one drop of eugenol to every seven drops of cement liquid. The presence of the eugenol tends to make the cement more yellow, and this should be compensated for in the testing solution by adding one drop of eugenol to every seven drops of glycerine.

Dental cements also can be colored by using the mineral stains. The most commonly used are oxid of zinc (lemon yellow), oxid of silver (yellow), oxid uranium (greenish yellow), oxid of gold (bright rose-red), purple of cassius which is the double oxid of gold and tin (purple-red), and sponge platinum and filings (grayish blue). It is much easier to attain esthetic perfection through the use of mineral stains than it is by trying to match colors through the addition of many different cements.

Probably the most nearly neutral cement is a mixture of equal parts of platinum and ivory. This is an acceptable mixture and can be used in most instances where the porcelain matches the natural teeth. After a test has been made with glycerine, the color of mineral stain needed to correct the cement can be

(Continued on page 25)

## NEWS ITEMS

### TESTIMONIAL DINNER FOR S. R. KLEIMAN

Dr. S. Richard Kleiman, immediate Past-President of the Chicago Dental Society, will be honored at a dinner to be held in the Crystal Room of the Palmer House on Tuesday, March 20th—with cocktails at 6:00 p.m. and dinner at 7:00. For further information, 'phone Dr. Gerson M. Gould, MOnroe 6-5443.

### BETTER BUSINESS BUREAU COOPERATION

For more than three and a half years, the major newspapers in Chicago have been free of dental laboratory advertisements. Imagine our surprise recently to find the ROTO Section of the *Chicago Daily News* carrying an ad of the ALL STATE DENTAL LABORATORY, one of the notorious mail order labs located in Chicago. Our last information indicates that this illegal operation is conducted by Maurice Mendell, one of the principal defendants in the injunction suit and the "kingpin" behind the "Public Denturist Bill."

This ad was reported to the Chicago Better Business Bureau and it promptly went to work on the problem. The *Daily News* claimed that the ad inadvertently had been taken and that it will appear once or twice more because the ROTO Section is printed a few weeks in advance. The *Daily News* promised that no more such ads would be accepted.

Ironically, the ad appeared on a page largely devoted to exposing "medical quacks"!

The Chicago Dental Society and the public in Chicagoland owe a tremendous debt of gratitude to the Chicago Better Business Bureau and its President, Mr. Kenneth Barnard. This is one organization that does a real job.

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- (3) PLATINUM "ARMORED" lingual surface porcelain jacket. Heavy PLATINUM plate covers the entire lingual surface of jacket. This new PLATINUM "ARMORED" porcelain jacket of ours should be used where the lingual porcelain will be thin or where the bite is extra heavy; also, on end-to-end bites.
- (4) PLATINUM REINFORCED Porcelain Jacket. A cap or framework of PLATINUM with the porcelain baked onto it. We recommend this type jacket where greatest all-round strength is desired.
- (5) DOUBLE STRENGTH Porcelain Jacket. This is a combination of the Platinum Lingual and Platinum Reinforced porcelain jackets.

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#### TO RENT PART TIME

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For Rent: Attractive Field Annex office, completely equipped for Hi-Speed and Hydrocolloid work. Available 2 days per week—Monday and Wednesday. Address C-19, The Fortnightly Review of the Chicago Dental Society.

#### WANTED TO PURCHASE

Wanted to Purchase: Loop office and practice. Confidential. Address C-12, The Fortnightly Review of the Chicago Dental Society.

#### WANTED TO RENT PART TIME

Wanted to Rent: Space in the Loop, Field Annex preferred, with or without dental equipment—for Saturday only. Telephone JUniper 8-3303.

#### OPPORTUNITIES

Wanted: Reliable dentist to take over established practice of dentist-owner for balance of term of military service. Option to purchase or rent. Phone Downers Grove, Ill., 2825.

Excellent Opportunity for a competent man with clinic group attached to new 100-bed hospital in northeast Lake County. Will be able to work independently yet have the conveniences of a clinic available. Address C-14, The Fortnightly Review of the Chicago Dental Society.

Young Dentist who has completed military service, to take over established practice on a percentage basis. Growing community. Phone Dundee, Illinois—Hazel 6-2302.

Wanted: Dentist, draft exempt, for general dentistry. Finest opportunity available. Address C-17, The Fortnightly Review of the Chicago Dental Society.

Dentist Wanted, full or part time. Good opportunity for right man. Dr. A. G. Sprecher, 3166 Lincoln Ave., WELLington 5-3414.

Wanted: Dentist to take full charge of fully equipped office in very busy Midwest Chicago neighborhood. Full week or half a week. Reliable. Ethical work only. Address C-18, The Fortnightly Review of the Chicago Dental Society.

Wanted: Associate for a new 9-room air-conditioned clinic-type dental office. South Side suburban area. Excellent opportunity for a man interested in full mouth rehabilitation. Send qualifications as to age, experience, etc. Also enclose picture. Address C-21, The Fortnightly Review of the Chicago Dental Society.

Dental Clinic on near South Side needs dentist on daily basis, one or more days per week, hours 9:00 to 5:00, Monday through Friday. Address C-22, The Fortnightly Review of the Chicago Dental Society.

#### HELP WANTED

Wanted: Experienced Dental Assistant, Loop office. No Saturdays or evenings. Write full particulars; address C-20, The Fortnightly Review of the Chicago Dental Society.

#### SITUATIONS WANTED

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### MISCELLANEOUS

**HYPNOTISM INSTRUCTION:** Evening and Wednesday afternoon classes. Offering a complete course in hypnotic induction with emphasis on time-saving speed techniques. Under direction of Edwin L. Baron, Ph.B. in Psychology (Loyola University 1935, University of Chicago 1945). Hypnotism Institute of Chicago, 64 W. Randolph Street, Chicago 1, FRanklin 2-4188.

### APPLICATIONS FOR MEMBERSHIP

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**KAEP, THOMAS J.** (Iowa 1953) North Suburban, 600 Waukegan Rd., Glenview. Endorsed by W. Philip Phair and William E. Young.

**LIPPITZ, HERBERT A.** (N.U.D.S. 1953) West Suburban, 5346 W. Jackson Blvd. Endorsed by Herbert J. Gordon and B. T. Bluestein.

**MARTIN, HAROLD L.** (N.U.D.S. 1955) North Suburban, 636 Church St., Evanston. Endorsed by Glenn E. Jackson and Corvin F. Stine.

**ROWLEY, EUGENE J.** (Loyola 1953) Englewood, 7905 S. Cicero Ave. Endorsed by B. H. Sachs and Warren H. Lutton.

**RUSSELL, THOMAS W.** (C.C.D.S. 1929) West Suburban, 114 N. Lorel. Endorsed by Case Kowal and Raymond S. Bardis.

## CEMENTATION AND ESTHETIC PROBLEMS

(Continued from page 19)

ascertained. These stains come in white, light and dark gray, black, blue, yellow, brown and red. As has been mentioned before, red and black should be avoided. Blue, when mixed with browns and ivory, sometimes produces a greenish tint and therefore should be used with caution. The addition of white will brighten any color. Yellow will also brighten any color, but when mixed with dark gray produces a mustardlike mix. Brown can be used to darken any color of cement but should be used sparingly. The grays are used primarily to tone down or saturate a color. The best sequence, therefore, would be to determine and obtain the hue first, say yellowish, then brighten it with white or yellow or darken it with brown. Finally, the color can be saturated with gray if indicated.

### SUMMARY

1. Proper diagnosis and attention to mechanical as well as periodontal requirements are essential to good crown and bridgework. Reliance on cement alone will only lead to eventual failure.

2. Dental cements account for many pulp deaths, and the protection of the dentin as well as the dental pulp is absolutely necessary.

3. The present methods of cavity sterilization do more harm than good. The future of the sterilization of cavities will depend on the ability to incorporate antibiotics in dental cements and filling materials.

4. The zinc phosphate cements are the agent of choice for most cementation purposes, but the plastic cements would appear to be superior in some respects.

5. Temperature glass slabs are necessary for proper cement manipulation, whether they are silicates or zinc phosphate. Retarded cements are also essential for proper cementation.

6. The gold crown remains the biggest problem in cementation in crown and

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bridgework. A technic has been developed that will overcome this.

7. Inorganic mineral pigments or stains may be used to control colors in plastic resins, porcelains or dental cements. The theory of color should be understood, and a correlation made between esthetics and cementation in crown and bridge procedures.

#### REFERENCES TO THE LITERATURE

1. Nuttal, E. B. Diagnosis and correction of occlusal disharmonies in preparation for fixed restorations. *J.A.D.A.* 44:399 April 1952.
2. Hirschfeld, I. Food impaction. *J.A.D.A.* 17:1504 Aug. 1930.
3. Goldman, H. M. Relationship of the gingival crevice and the alveolar crest. *J. D. Res.* 21:561 Dec. 1942.
4. Brodie, A. G. Significance of tooth form. *Angle Orthodont.* 4:41 Jan. 1935.
5. Spalding, G. R. Gingivitis. *J.A.D.A.* 23:2021 Nov. 1936.
6. Thomas, B. O. A. Relationship of operative procedures to the health of the periodontal tissues. *J.A.D.A.* 39:522 Nov. 1949.
7. Hine, M. K. Fibrous hyperplasia of gingiva. *J.A.D.A.* 44:681 June 1952.
8. Romine, E. R. Relation of operative and prosthetic dentistry to periodontal disease. *J.A.D.A.* 44:742 June 1952.
9. Frechette, A. R. Partial denture planning with special reference to stress distribution. *J. Pros. Den.* 1:700 Nov. 1951.
10. Tinker, H. A. Some essentials of crown and bridgework. *North-West Den.* 28:29 Jan. 1949.
11. Bronstein, B. R. Evaluation of basic concepts in mouth rehabilitation. *J. Pros. Den.* 1:560 Sept. 1951.
12. Nelson, E. A. Significant factors in occlusal restoration by means of crown and bridge prosthesis. *Pennsylvania D. J.* 16:3 Jan. 1949.
13. Lisanti, V. F., and Zander, H. A. Thermal injury to normal dog teeth: in vivo measurements of pulp temperature increases and their effect on pulp tissue. *J. D. Res.* 31:548 Aug. 1952.
14. Jeserich, Paul H. Factors necessary to minimize thermal changes in tooth structures from operative procedures. *New York J. Den.* 5:275 Dec. 1935.
15. Henschel, C. J. Heat impact of revolving instruments on vital dentin tubules. *J. D. Res.* 22:323 Aug. 1943.
16. Henschel, C. J. Development of thermal control. *J.A.D.A.* 33:194 Feb. 1946.
17. Peyton, F. A. Temperature rise and cutting efficiency of rotating instruments. *New York D. J.* 18:439 Nov. 1952.
18. Fish, E. W. An experimental investigation of enamel, dentin and dental pulp. London, John Bale Sons and Danielsson, 1933.
19. Seltzer, S. Medication and pulp protection for the deep cavity in a child's tooth. *J.A.D.A.* 39:148 Aug. 1949.
20. Seelig, A. Practical evaluation of histologic findings of effects of filling materials on the pulp. *New York J. Den.* 21:353 Oct. 1951.
21. Zander, H. A. Reaction of dental pulps to silicate cements. *J.A.D.A.* 33:1233 Oct. 1946.
22. Shroff, F. R. Effects of filling materials on the dental pulp: an histological experimental study with special reference to synthetic porcelain. *New Zealand D. J.* 42:99 July; 42:145 Oct. 1946.
23. Manley, E. B. Investigations into the early effects of various filling materials on the human pulp. *D. Record* 62:1 Jan. 1942.
24. Harvey, W.; LeBrocq, L. F., and Rakowski, L. Acidity of dental cements. *Brit. D. J.* 77:61 Aug. 4, 1944.



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25. Mosteller, J. H. Evaluation of intermediate base materials. J.A.D.A. 43:571 Nov. 1951.
26. Pulp reaction to operative procedures. Lederle Newsletter, 1953.
27. Docking, A. R., and others. Effect of orthodontic cements on tooth enamel. D. Record 72:243 Oct. 1952.
28. Zander, H. A., and Pejko, I. Protection of the pulp under silicate cements with cavity varnishes and cement linings. J.A.D.A. 34:811 June 15, 1947.
29. Glass, R. L., and Zander, H. A. Pulp healing. J. D. Res. 28:97 April 1949.
30. Easlick, K. A. Management of pulp exposure in the mixed dentition. J.A.D.A. 30:179 Feb. 1943.
31. Rosenstein, S. N. Pulp capping in deciduous teeth: report of a ten year study. J.A.D.A. 29:1632 Sept. 1942.
32. Berk, H. Effect of calcium hydroxide-methyl cellulose paste on the dental pulp. J. Den. Child. 17:65, 4th quart. 1950.
33. Zander, H. A. Effect of self-curing resins on the dental pulp. Oral Surg., Oral Med. & Oral Path. 4:1563 Dec. 1951.
34. Seelig, A. Effect of direct filling resins on the tooth pulp. J.A.D.A. 44:261 March 1952.
35. Lefkowitz, W.; Seelig, A., and Zachinsky, L. Pulp response to a self-curing acrylic filling material. New York D. J. 15:376 Aug.-Sept. 1949.
36. Paffenbarger, G. C.; Nelsen, R. J., and Sweeney, W. T. Direct and Indirect filling resins: a review of some physical and chemical properties. J.A.D.A. 47:516 Nov. 1953.
37. Bodecker, C. F. W. Anatomy and pathology of the teeth. Philadelphia, S. S. White Dental Mfg. Co., 1894, p. 323.
38. Kraus, E. E., and Kraus, L. L. Evaluation of the auto-polymer direct plastic filling materials. (Abst.) J. D. Res. 30:498 Aug. 1951.
39. Rosen, R. Plastics—today's \$64 question. J. Missouri D. A. 32:229 July 1952.
40. Coy, H. D. Direct resin fillings, J.A.D.A. 47:532 Nov. 1953.
41. Colton, M. B., and Ehrlich, E. Bactericidal effect obtained by addition of antibiotics to dental cements and direct filling resins. J.A.D.A. 47:524 Nov. 1953.
42. Bartels, H. A. Consultant symposium: Our empiric cavity sterilization. New York D. J. 17:3 Jan. 1951.
43. Frisbie, H. E., and Nuckolls, J. Caries of the enamel. J. Am. Col. Den. 13:84 June 1946.
44. Besic, F. C. Fate of bacteria sealed in dental cavities. J. D. Res. 22:349 Oct. 1943.
45. Frisbie, H. E., and Nuckolls, J. Histopathological study of caries of the human enamel operating beneath apparently sound and intact enamel surfaces. J. D. Res. 26:181 June 1947.
46. Seltzer, S. Bacteriologic status of the dentin after cavity preparations. J.A.D.A. 27:1799 Nov. 1940.
47. Seltzer, S. Effective duration of some agents used for dentin sterilization. J. D. Res. 21:115 April 1942.
48. Seltzer, S. Comparative value of various medicaments in cavity sterilization. J.A.D.A. 28:1844 Nov. 1941.
49. Ireland, R. L. Ammoniacal silver nitrate as sterilization agent for deep-seated decay in deciduous teeth. J.A.D.A. 26:871 June 1939.
50. Stephan, R. M.; Dorfman, A., and Muntz, J. A. in vitro studies on sterilization of carious dentin. III. Effective penetration of germicides into carious lesions. J.A.D.A. 30:1905 Dec. 1943.
51. Rabinowitch, B. Z. Ammoniacal silver nitrate: study of its value in operative dentistry today. J. Den. Children 18:22, 2nd quart. 1951.
52. Seelig, A.; Fowler, R. C., and Tancheater, D. Effect of penicillin G potassium

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plus calcium carbonate on surgically exposed dental pulps of the rhesus monkey. *J.A.D.A.* 48:532 May 1954.

53. Roth, L. H. Aureomycin as applied to deciduous teeth. *New York J. D.* 22:213 May 1952.

54. Souder W., and Paffenbarger, G. Physical properties of dental materials. Circular 433. U. S. Dept. of Commerce, National Bureau of Standards. Washington, D. C., Government Printing Office, 1942.

55. Crowell, W. S. Physical chemistry of dental cements. *J.A.D.A.* 14:1030 June 1927.

56. Rovelstad, G. H., and St. John, W. E. Condition of the young dental pulp after the application of sodium fluoride to freshly cut dentin. *J.A.D.A.* 39:670 Dec. 1949.

57. Welden, F. S. Cementing gold inlays. *D. Items Interest* 44:174 March 1922.

58. Gillett, H. W., and Irving, A. J. Gold inlays by the indirect system. *D. Items Interest* 50:339 May 1928.

59. Yock, D. H. Indications for the use of plastic resins in crown and bridge. *J.A.D.A.* 46:505 May 1953.

60. Starr, F. C. Acrylic in jacket crowns and bridge pontics. *J. Pros. Den.* 2:543 July 1952.

61. Nealon, F. H. Acrylic restorations: operative nonpressure procedure. *J. Pros. Den.* 2:513 July 1952.

62. Peyton, F. A.; Shiere, H. B., and Delgado, V. P. Some comparisons of self-curing and heat-curing denture resins. *J. Pros. Den.* 3:332 May 1953.

63. Caul, H. J., and Schoonover, I. C. The color stability of direct filling resins. *J.A.D.A.* 47:448 Oct. 1953.

64. Leader, S. A. Acrylic crazing; its significance, prevention and treatment. *Brit. D. J.* 87:205 Oct. 21, 1949.

65. Coy, H. D. An evaluation of acrylic resin as a restorative material. *J.A.D.A.* 48:266 March 1954.

66. Rank, A. Die Hohlfacette aus Kunststoff bei Kronen-und Brucken-arbeiten. *Zahn-artzl. Rdsch.* 61:374 July 5, 1952.

67. Nelsen, R. J.; Wolcott, R. B., and Paffenbarger, G. C. Fluid exchange at the margins of dental restorations. *J.A.D.A.* 44:288 March 1952.

68. McLean, J. W. Screw pressure crown. *Brit. D. J.* 85:128 Sept. 17, 1948.

69. Tylman, S. D. Year book of dentistry, 1949. Chicago, Year Book Publishers, 1950, p. 79.

70. Stockton, R. K. Direct acrylic resin inlays. *D. Digest* 60:161 April 1954.

71. Sears, A. W. Hydrocolloid impression technique for inlays and fixed bridges. *D. Digest* 43:230 May 1937.

72. Thompson, M. J. Reversible hydrocolloid impression material: its treatment and use in operative and prosthetic dentistry. *J.A.D.A.* 39:708 Dec. 1949.

73. Grey, J. M. Evaluation of hydrocolloid inlay technic. *J. Canad. D. A.* 19:3 Jan. 1953.

74. Kendrick, Z. V., Jr. Sears hydrocolloid impression technic in restorative dentistry. *J.A.D.A.* 33:445 April 1946.

75. Hampson, E. L. Hydrocolloid impression technic for multiple inlays and bridge-work. *Brit. D. J.* 88-240 May 5, 1950.

76. Buchmann, W. A. Use of hydrocolloids in inlay and bridge prosthesis. *Fort. Rev. Chicago D. Soc.* 16:7 Nov. 15, 1948.

77. Phillips, R. W.; Price, R. R., and Reinking, R. H. Use of alginate for indirect restorations. *J.A.D.A.* 46:393 April 1953.

78. Pfeiffer, K. R., and Jeffreys, F. E. Complete bridge technic utilizing the alginate hydrocolloids. *J.A.D.A.* 40:66 Jan. 1950.

79. Skinner, E. W., and Pomes, C. E. Alginate impression materials: technic for manipulation and criteria for selection. *J.A.D.A.* 35:245 Aug. 15, 1947.

80. Dwight, O. D. Copper plating of reversible hydrocolloid impressions. *J. D. Res.* 28:456 Oct. 1949.

81. Schwartz, M. The electroplating of the colloid impression materials. *D. Items Interest* 74:217 March; 74:346 April; 74:427 May 1952.

82. Simpson, R. L. Failures in crown and bridge prosthodontics. *J.A.D.A.* 47:154 Aug. 1953.

83. Gillett, H. W. Gold inlays by the indirect system. *D. Items Interest* 49:943 Dec. 1927.

84. Hollenback, G. M. A practical contribution to the standardization of the casting technique. *Pacific D. Gazette* 37:1 Jan. 1929.

85. Henschel, C. J. The effect of mixing surface temperature upon dental cementation. *J.A.D.A.* 30:1583 Oct. 1943.

86. Gates, M. A. Cementing inlays. *J.A.D.A.* 15:435 March 1928.

87. Nylander, V. T. Inlay technic. *J.A.D.A.* 11:827 Sept. 1924.

88. Tylman, S. D. Biologic concepts of fixed partial dentures. *New York J. Den.* 18:386 Dec. 1948.

89. Klaffenbach, A. O. Science, art and ceramic fundamentals involved in porcelain jacket crown prosthesis. *Austral. J. Den.* 55:88 April 1951.

90. Bastian, C. C. Construction of porcelain jacket crowns in close bite cases. *Fort. Rev. Chicago D. Soc.* 22:7 Oct. 1, 1951.

91. Waerhaug, J. Tissue reactions around artificial crowns. *J. Periodont.* 24:172 July 1953.

92. Mosteller, J. H. The relation between operative dentistry and periodontal disease. *J.A.D.A.* 47:6 July 1953.

93. Selberg, A. Cast gold crowns. *J. Tennessee D. A.* 29:21 Oct. 1949.

94. Hoffman, J. M. Common problems in the construction of the full cast crown. *J.A.D.A.* 48:272 March 1954.

95. Adler, P. The importance of the "marginal index" in cementation of metal and porcelain work. *D. Items Interest* 63:215 March 1941.

96. Tylman, S. D. Theory and practice of crown and bridge prosthesis, ed. 2. St. Louis, C. V. Mosby Co., 1947, p. 764.

97. Strum, J. Z. Technic for improved cast crown. *New York D. J.* 16:313 June-July 1950.

98. Clark, E. B. The color problem in dentistry. *D. Digest* 37:646 Oct. 1931.

99. Clark, E. B. Selection of tooth color

for the edentulous patient. *J.A.D.A.* 35:787 Dec. 1947.

100. Clark, E. B. The color problem in dentistry, 4th article. *D. Digest* 37:732 Nov. 1931.

101. Cross, K. K. Color: its principles and their application to prosthetic restorations. *D. Digest* 28:765 Dec. 1922.

102. Argue, J. E. The problem of tooth color. *J.A.D.A. & D. Cosmos* 24:1341 Aug. 1937.

103. Nelson, C. A. Control of color in dental plastics. *J.A.D.A.* 29:648 April 1942.

104. Rich, V. G. Pigmentation of dental plastics. *J.A.D.A.* 31:249 Feb. 1944.

105. Silverman, S. M. Staining of acrylic jacket crowns and pontics. *D. Digest* 51:570 Oct. 1945.

### SAY IT ISN'T SO!

Our Englewood correspondent, Dr. Waska, advises that a rumor has been going the rounds to the effect that Dr. Ralph Rudder is retiring from dental practice. Dr. Rudder says it isn't so and wants the Society's members to be so informed.

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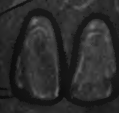
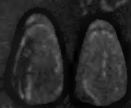
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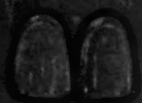
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## NEWS OF THE BRANCHES

(Continued from page 14)

him to take care of the sightseeing. . . . He just returned from Pittsburgh but the balance of his card is so smoky I can't read it. . . . Don't forget to write your congressman to support the Dental Research Bill now before Congress.—*Bob Pollock, Branch Correspondent.*

### NORTH SIDE

While you will be reading this, I will be in Los Angeles, visiting my new granddaughter, born on the 16th of February. I was there last September to see my first grandson, and let me warn you—don't get me started or I'll use up the entire column just talking about him. . . . Ruby Kadens went to California for a two-week vacation. . . . We are sorry to report the death of one of our very active members, Chester Ihle, who died on Feb. 14th. . . . Just heard that Mrs. Jules Barrash is at home, convalescing nicely after a serious automobile accident. . . . Latest on OASI: The House of Delegates of the American Bar Ass'n adopted a resolution (100 to 25) calling for Compulsory Inclusion for lawyers if the voluntary type is not permissible, and they have sent the resolution to the Senate Finance Committee. I am sure the dentists have the same standards as the lawyers. . . . In accordance with the CDS policy of contacting state legislators to influence them regarding the need for enforcing legislation to curb the illegal labs, the Uptown Forum will have Esther Saperstein, candidate for the State Legislature in the 8th district, speak to them on March 16th. She is very much in favor of our position on this matter and since she has an excellent chance of being elected, we will most likely have a voice in the state legislature. . . . Just heard that our Bill Schoen, the *Illinois Journal* Editor, is retiring from that position which he has held for the past 13 years or so. Bill has done a real outstanding job as Editor, and we hope his successor will do as well. Such good material as Bill should be remembered for other responsibilities

in our Society. . . . Another very sad note: just got word that one of the hardest workers for OASI, Al Drew, died on February 26 after a long illness. We will miss him. . . . Did I mention that Lawrence Schlocker just got back from a Caribbean cruise, having stopped at 8 different ports? He says it was most interesting, relaxing and educational, and recommends it to all in the profession. He is moving to the now famous Peterson Medical Building, after having been in his first location for some 23 years. Good luck, Larry. . . . Bill Semiloff, returning from a visit to his very ill father in New York, was called back there again on receiving word that his father has passed away. Our condolences to you, Bill. . . . Marv Waller has transferred into our branch, and as many of his co-workers in the Chicago Academy of Dental Research are in our branch also, we can be expecting to hear more from them and benefit by their research. . . . Bob Winders, formerly associated with Harold Sitron, graduated NU as an Orthodontia specialist, and having won the \$500.00 award for his thesis, is on his way to Boston to present his paper. . . . **MARK YOUR CALENDAR NOW!** Election Night at the North Side April 3rd, for complete slate of officers. . . . Also on the same night, our Regular Meeting, starting as our main speaker: Dr. Bob Atterbury, whose topic will be "Intermediate Oral Surgery." Election and meeting will be held at the Edgewater Beach Hotel, on Tuesday Nite, April 3rd. Let's see if we can't have 100 per cent attendance! . . . The next column will be handled by a master: Harold Sitron. Look for it.—*I. H. Shapiro, Branch Correspondent.*

### ENGLEWOOD

#### In Memoriam

The Englewood correspondents have forgotten their copy for the Review for the second issue in a row.

(Editor's Note: As a matter of fact, we were neglected by several of our correspondents for this issue.)



